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JANUARY 26, 1987

- Measuring programmer productivity
- IBM's SNA signals
- Down-to-earth AI
- Data tamers
- Publishing power

COMPUTER DECISIONS®
THE MAGAZINE FOR MIS EXECUTIVES
A HAYDEN PUBLICATION

RUNNING FOR THE GOLD

On Wall Street, MIS executives start the day running, and they can't stop. But for survivors, the Street is paved with gold.

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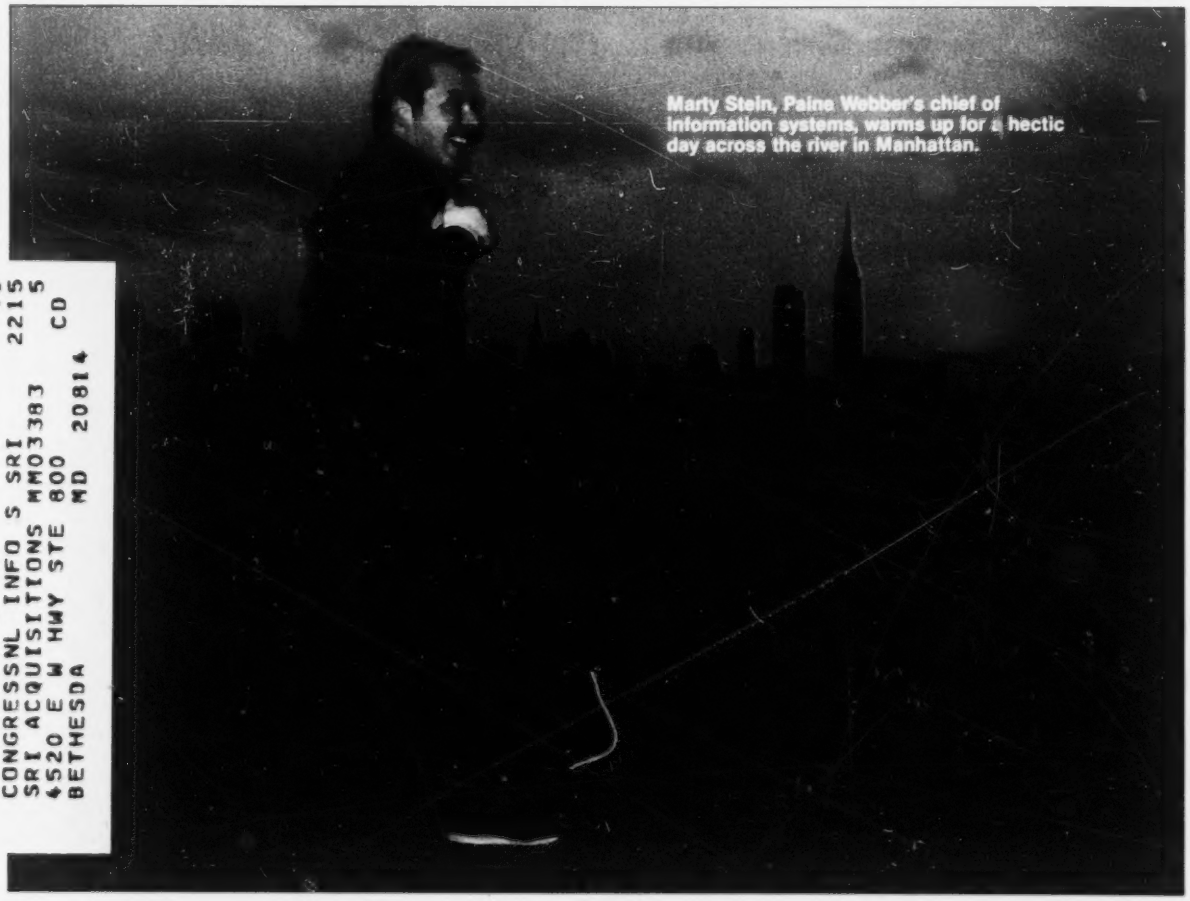

Marty Stein, Paine Webber's chief of information systems, warms up for a hectic day across the river in Manhattan.

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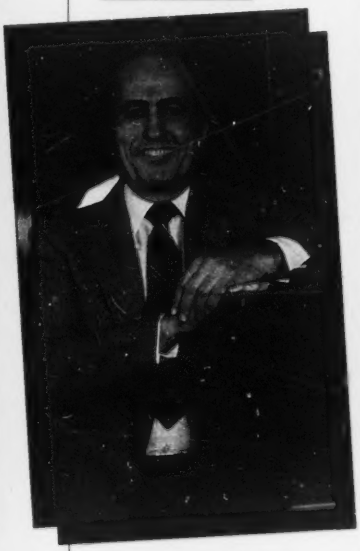

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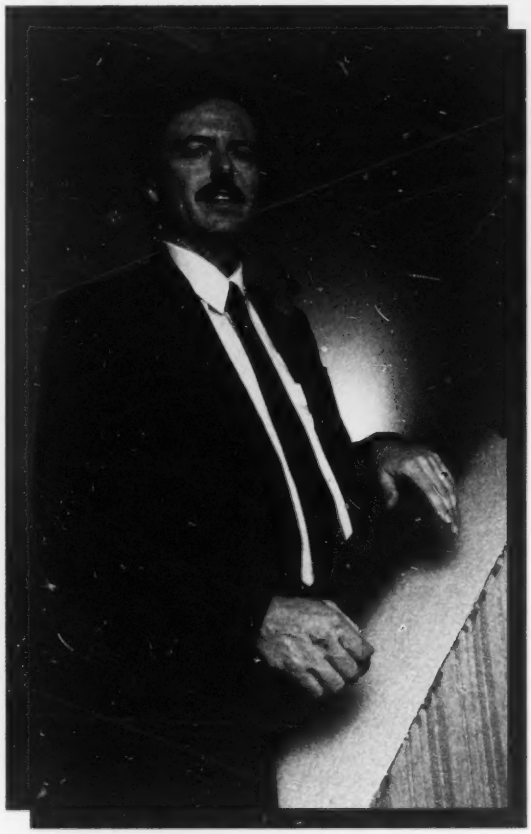

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Computer Decisions (USPS 771-040 ISSN 0010-4558) is published biweekly for $65 per year by Hayden Publishing Co., Inc., 10 Mulholland Dr., Hasbrouck Heights, NJ 07604. Second-class postage paid at Hackensack, NJ 07602, and additional mailing offices. POSTMASTER: Send address change to *Computer Decisions*, P.O. Box 1031, Southeastern, PA 19398. For subscription information, please call (215) 337-8623.

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Oh, those !#? dirty rats

Here's another reason to enforce the long-standing prohibition against food in the data center: Food particles are attractive to rodents that may nest in pleasantly warm equipment.

This is just what happened about two years ago at a data center near the docks of Buenos Aires, Argentina. The data center belongs to CPC International, a multinational food processing giant. Computer center operators taking coffee breaks at their posts spilled crumbs from sandwiches and crackers. This attracted rats, which nested and defecated on crucial connections, shorting them out, according to a senior CPC official.

The solution was simple: installation of an ultrasonic sound device that drives the rats bats but is unheard by humans. □

A cheap and easy PBX/LAN

Telegence Corp. claims to have cut the price of sending data over existing telephone wires by as much as 80 percent with a new combination data PBX and micro local-area network that supports data speeds of up to 1 Mbit per second.

Instead of transmitting digital impulses over telephone wires, as AT&T's Starlan LAN does, Tokenstar converts digital transmissions from micros or asynchronous terminals to high-frequency analog transmissions. Voice conversations aren't interfered with. Tokenstar costs from $130 to $695 per connection, according to Telegence, a Westlake Village, CA-based startup. The PBX/LAN does not yet support synchronous (IBM 3270) communications.

Riverside, CA-based consultant Courtney Klinck sees Tokenstar's widest appeal as a low-cost, easy-to-install data PBX for those parts of corporations in which wiring and communications expertise is at a minimum. Tokenstar consists of book-sized boxes that plug into telephones and a hub that sits in a wiring closet a maximum of 1,000 feet away from a phone. The hub separates data transmissions from voice transmissions. Up to 250 users can be accommodated on the PBX/LAN. Call (213) 877-0337 for more information. □

Micro monitor for cpus

Axios Products Inc., a Hauppauge, NY-based software house, claims users can save up to 10 times the cost of capacity management for IBM mainframes with its new micro-based system.

Axios' Pilot/MVS and Pilot/CICS cost $3,500 each and provide functionality similar to that of the mainframe-based performance monitor and modeling packages currently available, the vendor says. Such tasks as determining the five key factors affecting cpu performance, which might take hours on a mainframe, take seconds on a micro with Pilot, claims David Kirk, president of Axios. The packages include templates for Lotus 1-2-3.

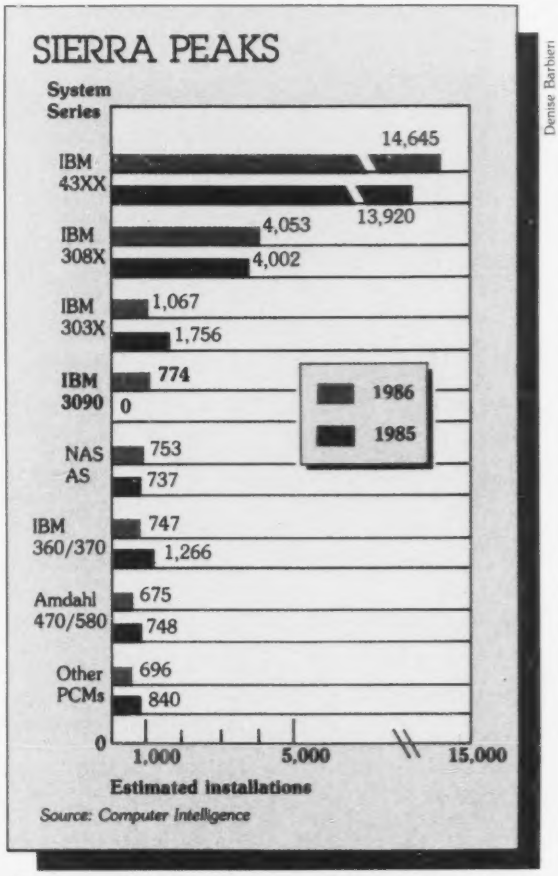
The micro packages run on IBM Personal Computers and compatibles with terminal emulation boards, and include mainframe and micro modules that massage data from existing data collection software. The software is designed to run with Axios' $4,000 Pilot/SMF, a mainframe package that organizes raw mainframe data.

Call (516) 348-1900 for more information. □

Supra rates high, by Codd

E.F. Codd, originator of the relational database model, recently determined that Supra, the database management system from Cincom Systems Inc. (Cincinnati), follows 32 of the 42 rules he currently uses to define the relational model. The score includes adherence to 10 of Codd's 12 basic rules.

According to Codd, president of The Relational Institute (San Jose, CA), Supra scored higher than any DBMS he has reviewed. Codd's score for IBM's DB2 was 23, including adherence to seven of the 12 basic rules. □



The success of IBM's 309X "Sierra" mainframe class is evident in this estimate. After only one year of shipments, there are already 20 percent as many 309Xs as older 308Xs. Meanwhile, Amdahl suffered a 10 percent decrease waiting for shipments of its new 5890 series to kick in.

(Continued from page 20)

chart). To qualify for a network CSA discount, a user must operate a network command center with network monitoring functions. For systems CSA, a user must have a help desk and be engaged in problem determination and resolution and change control. IBM says system management facilities eliminate many service calls to IBM service centers and save IBM about 13 percent to 15 percent in service costs. The vendor asserts that CSA will allow it to pass those savings on to customers. IBM adds that most of its large users already have such facilities in place and should qualify easily for CSA.

To participate in CSA, users must have their maintenance facilities approved by IBM. IBM will charge users an initial assessment fee for the program: $3,500 per location for the computer system option, and $8,600 per location for the network option. Henry W. Stigler, director of service offering and special bids for IBM's National Service division, says that if a data center doesn't initially qualify, IBM will explain what needs to be done to pass the test. The user will then have three months to address shortcomings. IBM will conduct the follow-up assessment at no cost, Stigler adds. Under the terms of the CSA agreement, IBM also holds the right to make unannounced periodic audits of a data center to ensure that proper maintenance procedures are being followed.

One data center manager for a large utility, who requested anonymity, says the initial CSA fees are negligible to a large installation paying $600,000 for maintenance. "If a large installation can save $120,000, it will gladly pay an initial fee," the manager says. "And I guarantee most large installations will qualify without getting inspected. IBM knows our shop. We have IBM technicians here around the clock who know our procedures."

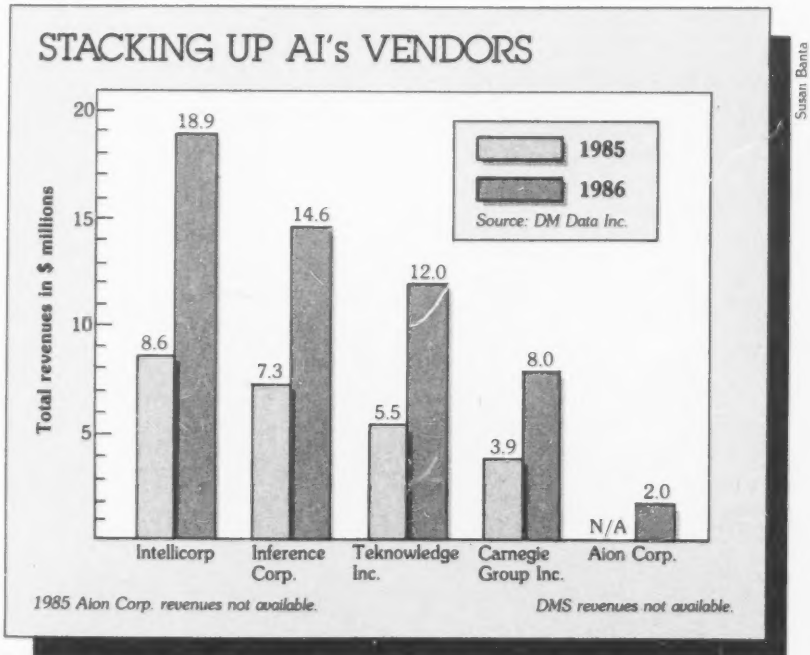
CSA roots. IBM has been building up to CSA for years, analysts say, through workshops offered to users on system and network management, and under the guise of two programs that also offered maintenance discounts to users who managed problems. The Enterprise Management Amendment (EMA), a pilot test first undertaken five years ago, offered discounts to 60 selected large customers. A second program, the Customer Managed Network Amendment (CMNA), offered discounts to 300 customers who signed up. Both EMA and CMNA are being terminated with the announcement of CSA. EMA and CMNA customers will be given a year to convert to CSA. Initial CSA assessment fees will be waived for these users, IBM says.

The origins of CSA can be traced more to EMA than to CMNA, says Donald Blumberg, a Fort Washington, PA, consultant specializing in service strategies. "EMA was limited to certain major national accounts that were required to sign up for longer terms," he notes. Although CSA does not require all IBM systems and network equipment to be included in the maintenance agreement, as EMA did, says Blumberg, "There is a tremendous economic incentive for the user to put all IBM equipment under the agreement. The greater the volume, the greater the discount." Blumberg estimates that large users can realize up to a 40 percent maintenance saving under CSA. He estimates that EMA users were getting a 15 percent to 20 percent discount.

A matter of size. IBM claims that CSA is not just aimed at large corporations. "Smaller organizations can benefit from putting systems management disciplines in place," says Stigler. "Our studies indicate that customers who do an effective job of systems and network management reduce their own service costs, increase the reliability and throughput of their networks, and save themselves a lot of agony."

Jim Slaymon, operations manager at PT Components, an industrial products manufacturer in Indianapolis, says his shop falls beyond the feasibility line. The manufacturer's data center houses an IBM 3081, an IBM 4331, and 30 IBM 3380 disk drives. "If we pay the assessment fee and do not meet IBM's requirements, we lose that money," he says. "Plus, even though IBM does not specify any one product, or even that it has to be IBM, we would eventually wind up needing other pieces of software to qualify. For the 6 percent we figured we'd save through CSA for one year, it is not a wise investment." IBM's requirement that users operate an information center or help desk manned by technical support staffers also bothers Slaymon. "The minimum salary for that type of expertise is $30,000," he notes.

Cautious optimism. IBM reps are just now beginning to sell CSA. "I am cautiously optimistic about the plan," says Richard Jesky, director of computer operations at Blue Cross/Blue Shield of Michigan (Detroit). Jesky believes his shop—which includes four types of IBM mainframes, including a 3090—will qualify immediately, and adds that it will probably opt for a three-year deal. "IBM is asking users to practice fundamental disciplines to manage their own systems," he says. "We practice these disciplines, which enables us to give IBM better information faster. In turn, IBM gets the service job done faster." Slaymon agrees that developing good maintenance habits in a data center reduces costs in the long run. "But you can discipline your shop using a third-party maintenance company as well," he asserts. □



The rising revenues of the top five developers of artificial-intelligence systems reflect the move by those developers into mainstream corporate applications. For more on the leading lights in AI, see "Out of the ivory tower," page 47.

MAKE A THIRD-PARTY DEAL

Independent maintenance vendors may be cheaper and faster—plus service mixed systems.

by David Whieldon, Large Systems Editor

Until recently, most MIS managers turned to hardware vendors to maintain major systems. That was natural—in the early days of "electronic accounting," maintenance was simply a part of the monthly leasing bill. And, only four or five years ago, no hardware vendor would have deigned to touch another manufacturer's gear.

All that's changed, however. In fact, so many alterations have taken place in the third-party maintenance business that it's recognizable only to industry insiders and market researchers. Divisions have been cut loose to become new entities. Datapoint Corp.'s service arm became Intelogic Trace Inc., for instance. There have been mergers, such as the one between General Electric's Integrated Communication Services Operation and the RCA Service Co., forming an as yet unnamed organization. The AT&T divestiture allowed big fish like Bell Atlantic Corp. to swallow smaller fish like Sorbus.

What's more, some leading hardware vendors—including Honeywell Inc. (Minneapolis), Control Data Corp. (Minneapolis), and Unisys Corp. (Detroit)—have discovered that they can maintain hardware that's not their own and make money at it. That's partly because they can expand their existing maintenance businesses, spreading overhead over more clients and thus increase profitability. "Many of the computer manufacturers' service operations subsidize other branches of their corporations," claims Alan Andrus, president of Grumman Systems Support Corp. "They're priced high to cover corporate overhead."

Despite recent growth and higher visibility, third-party service outfits have made only a dent in the overall service-maintenance market. "In 1986, the third parties' revenues amounted to $1.3 billion, with growth of 15 percent to 20 percent a year, mostly from acquisitions," says D.R. MacNaughton, president of Business Development International, a Franklin Lakes, NJ, consultancy. But he projects that maintenance revenues for IBM alone in 1986 will be $4.1 billion, and for the entire computer industry, $8 billion. The third parties will grab only a 7 percent to 16 percent share of the market.

At the head of the pack of third-party maintainers are TRW's Customer Service division and Bell Atlantic's Sorbus, each with estimated 1986 revenues of $190 million, according to a study by MacNaughton. Not far behind are Intelogic Trace, the newly merged GE/RCA service organization, and Control Data's Engineering Services, each with more than $100 million in revenues. Other important players include Momentum Service Corp. (Parsippany, NJ), Dataserv Computer Maintenance Inc., now being acquired by Bell South Corp. (Atlanta), Grumman Systems Support, and Eaton Corp.'s Data Systems Services division.

Managers don't have to know who's who to benefit from third-party offerings. What's more important is to understand the possibilities for saving money and streamlining operations.

"There's a payoff if maintenance is managed," says Daniel Cavanagh, vice president of MIS at Metropolitan Life Insurance Co., New York. While Met Life's top management is concerned with how maintenance costs affect the bottom line, Cavanagh is given full responsibility to pare expenses as he sees fit. "Five or 10 years ago, you automatically got maintenance from a vendor," he says. "Now you have to take a hard look at maintenance costs and manage them." Met Life, which has a contract with the Customer Services division of Honeywell Information Systems for service on its Honeywell DPS-6 minicomputers, Codex modems, and AB Communications switches in sales offices, saves about 10 percent on its maintenance bill by going third party, Cavanagh estimates.

Cavanagh cautions that it's difficult to come up with exact percentages or dollar figures, since savings vary with negotiations and contracts. Maintenance vendors and observers also disagree on how much can be saved, but the claims and estimates range from 10 percent to 30 percent under what IBM, Unisys, Digital Equipment Corp., and other major manufactur-

CONTRACT SERVICE

Dataserv Computer Maintenance
(612) 829-6000 **Circle 459**

Honeywell Third Party Svcs.
(617) 431-3177 **Circle 460**

McDonnell Douglas Field Svc.
(714) 250-1000 **Circle 461**

Nat'l. Advanced Syst.
(415) 962-6000 **Circle 462**

Storage Tech.
(303) 673-6761 **Circle 463**

Systec
(305) 323-0230 **Circle 464**

Unisys
(215) 542-3755 **Circle 465**

HOW FAST IS FAST ENOUGH?

Average response and repair time needed (in hours)

User	Mainframes	Minis	Micros/ workstations
Hospitals	3.7	8.9	7.8
Banking	4.7	8.6	9.7
Manufacturing	5.4	8.7	9.0
Transportation/ distribution	8.3	8.3	11.3
Retailers	8.1	9.3	10.1
Insurance	7.2	8.0	8.6
Education	10.4	13.9	14.3
Government	8.0	6.5	11.5
Overall	6.0	8.7	9.7

Source: D.F. Blumberg & Assoc. Inc.

ers bill for service on their own products.

Glenn Dawson, principal consultant at the Service Research Group, Palmyra, NJ, agrees that it's difficult to pin down costs. To determine maintenance costs, he says, users must inventory hardware and add up line-item maintenance charges for all components. Those charges can then be compared to proposals from third-party maintainers product by product or on an installation of mixed products. Still, says Dawson, the difference on specific items may amount to 10 percent to 15 percent less than cost of IBM maintenance.

Because so many computers and peripherals are commodities today, major vendors can't lock customers into maintenance agreements, says Michael Mahoney, director of sales at the Customer Services division of Honeywell Information Systems. "There's no longer a captive audience," he says. In some shops, vendors may have manufactured only the processors—and may be in no better position to do maintenance than a third party. Offering service on Honeywell and other manufacturers' products, Honeywell Information Systems sees competition for such work heating up, Mahoney says. "On a major bid we've had as many as 32 competitors after the first cut."

At the same time, maintenance vendors find it necessary to deal with more and more products in customers' shops. Mahoney points out that Honeywell now

> "There's a payoff if maintenance is managed."
> *Cavanagh, Metropolitan Life*

services 2,000 products not manufactured by the vendor. Likewise, Roger Grant, vice president of marketing and sales at Intelogic Trace, notes that the corporation maintains 3,000 different products, from IBM System/34 and /36 minis down through a variety of personal computers and peripherals, even though Datapoint equipment maintenance furnishes a substantial portion of its revenues. And John Harnett, director of industry services at TRW's Customer Service division, says third parties look for high-volume products like the S/36 to service. He adds that most third parties are willing to bid on proposals for varied systems, including entire communications networks.

The advantage of dealing with one maintenance vendor in a mixed-vendor setting is obvious: It prevents finger-pointing by vendor field engineers. But there's more to it than that, says Daniel Cavanagh. "It eliminates the problem of calling the wrong vendor, for example, if a problem exists in a modem rather than a minicomputer," he says. In short, if one corporation is responsible for all maintenance, then its representatives can't duck the responsibility for any single item.

Third-party vendors can serve MIS managers in yet another way, according to Alan Andrus at Grumman Systems Support. "Service aside, a third-party service provider can be used as a negotiating lever with a manufacturer unwilling to provide certain services, such as dedicating engineers to a customer site, greater availability of spare parts, or more say in field engineers assigned," he says.

Third parties can also extend the life of systems. "IBM makes boxes, and often its answer to a problem is to recommend bigger and more sophisticated boxes and additional peripherals," says Grant. "We may be able to supply new logic boards or additional memory to give the system more functionality, even if the manufacturer won't support the system."

Poor service from a major vendor is a strong motive for switching to third-party maintenance. When a large midwestern bank switched from IBM hardware to take advantage of software running only on DEC's VAX 8600 and 11/785, the data center manager turned to a third party because he was dissatisfied with DEC's service. "We'd been spoiled by IBM service," says the manager. "It was difficult to get hold of the DEC service representative. We couldn't get the two-hour service we wanted, and sometimes had to wait three days for parts from the East Coast. Unlike IBM, DEC didn't help in connecting third-party products, such as disk drives."

The bank considered and accepted a

THIRD-PARTY MAINTENANCE PROVIDERS

Independent service vendors

Vendor	Service wait	Hourly rates
Bell Atlanticom (609) 987-7000	3 to 24 hrs.	$60 Circle 444
Control Data (612) 851-4000	2 to 4 hrs.	$113 to $188 Circle 445
Eaton (213) 215-0853	4 hrs.	$75 to $85 Circle 446
General Electric Computer Svcs. (404) 843-6200	Negotiable	$85 to $95 Circle 447
Grumman Syst. Support (516) 682-5306	4 hrs.	$75 to $105 Circle 448
Harris (305) 974-1700	4 hrs.	$120 to $140 Circle 449
Intelogic Trace (512) 699-5700	Negotiable	$55 to $90 Circle 450
NCR (513) 439-8600	Within 4 hrs.	$88 to $175 Circle 451
Sorbus (215) 296-6000	2 hrs.	$61 to $173 Circle 452

Rates and response times are frequently negotiable through contracts; most prices given are for noncontract work.

Independent service vendors

Vendor	Service wait	Hourly rates
Total Tech. Svcs. (216) 237-8363	2 hrs.	$50 (micro products); $171 to $202 (mainframe products) Circle 453
TRW (201) 575-7110	2 to 4 hrs.	$100 to $150 Circle 454
Western Union (201) 825-5000	4 hrs.	$85 (contract); $105 (non-contract) Circle 455

Conditional maintenance providers

Vendor	Service provided/wait	Rates
DEC (617) 870-2061	Services DEC and non-DEC equipment for DEC customers/negotiable	Contract-dependent Circle 456
IBM (201) 848-1900	Services IBM PCs and related products/negotiable	Product-dependent Circle 457
Xerox/Americare (716) 427-5400	Micro service/24 hrs.	$125 to $145/hr. Circle 458

proposal from Grumman Systems Support. "We had nothing to lose," he says. "It's been very successful. We have a representative on-site full-time and access to spare parts stored locally. The cost is 15 percent less than the DEC contract."

Simply cutting back on service is a familiar way to save maintenance dollars. The data center manager at the midwestern bank says, "To be more cost-effective, we put some equipment that doesn't break down often on a per-call basis and saved a couple of hundred thousand dollars in 1985." However, he warns that users shouldn't push so far as to risk corporate data assets. Grant adds that "there's a trend to cutting coverage on less critical equipment."

For some users, self-maintenance has become an attractive alternative that may cut costs by as much as 40 percent. It's especially suitable for personal computers, boards, and peripherals. Dan Cavanagh describes Met Life's two-building "campus" in New York, where 1,500 IBM Personal Computers or compatibles are located. A team of four employees, trained by the corporation, swaps out parts from a parts inventory and sends out selected parts for repair. Users most likely to perform their own maintenance are manufacturers, engineering and scientific corporations, and banks, says Harnett of TRW.

"Even if service hasn't been bad, a third-party service provider can be used as a negotiating lever with a manufacturer unwilling to provide certain services."
Andrus, Grumman

Some vendors provide service for smaller items right on the customer's premises. "Many corporations, like DEC and Hewlett-Packard, offer depot service for micros and terminals," says Gary Khederian, senior research analyst at International Data Corp., Framingham, MA.

At Sunkist Growers Inc., Sherman Oaks, CA, dp manager Jack Abbott and two other managers discussed maintenance for an IBM mainframe and peripherals with Sorbus, and as part of that effort checked references and made contacts with users. They then held a meeting with IBM representatives to see if they could counter the Sorbus offer.

"We had to look at the dollars," says Abbott, "and Sorbus offered us a savings of 21 percent over IBM." Abbott and his colleagues also made sure that a 30-day clause was part of the contract: Sunkist can get out of the contract on 30 days' notice if it isn't satisfied with service and the equipment will be brought up to IBM standards to be serviceable by IBM again.

Abbott believed that he didn't need all the support that IBM offers its customers. IBM offered Sunkist two skilled systems programmers, one experienced with OS/VS1 and the other with VM, and a telecommunications manager to service its network of 5,000 to 6,000 citrus growers in California and Arizona and about 150 online terminal users and batch operations in headquarters. IBM service is still available to Sunkist on a time-and-materials basis.

Most experts agree that the growth of third-party maintenance, the increased competition among manufacturers and third parties, and users' growing awareness of alternatives can only benefit those users. Shrewd managers, if they weigh the choices, can exploit the opportunity to their advantage—and to the advantage of their managements. □